

reduce costs, and make a positive contribution to revitalizing the American economy.

26. Clearly, the broad array of services that can be provided by AVM are in the public interest. AVM promotes the safety of life and property, reduces the possibility of theft, and can make the provision of countless new and innovative services available to the American public in an affordable and efficient manner.

**III. ANALYSIS OF PROPOSED PERMANENT RULES FOR
AVM OPERATIONS IN THE 902-928 MHz BAND.**

27. Teletrac proposes to continue the existing regulatory hierarchy created under the interim rules so that AVM systems will remain subordinate to government radio location and ISM operations. The specific permanent rules we propose, including modifications to existing rules, are set forth in Appendix 1. We discuss our significant proposals below.

A. Definition Of AVM.

28. Teletrac proposes that AVM be re-defined as follows:

Automatic Vehicle Monitoring (AVM). The use of non-voice signalling methods from and to location units to make known the location of such units at fixed points. AVM systems may also transmit status and instructional messages related to the units involved.

This new service definition describes the technology's functional capabilities--i.e., its ability to monitor all animate and inanimate objects, rather than merely vehicles.^{30/}

B. Frequency Assignment Plan.

29. The 1974 rules allocated two separate frequency segments, 904-912 and 918-926 MHz, for wideband pulse-ranging AVM systems.^{31/} These two 8 MHz bands had

30. See 47 C.F.R. § 90.7 (1991). The proposed re-definition merely changes the term "vehicle" to "location unit." A conforming change is also recommended to 47 C.F.R. § 90.239(a) (1991), i.e., all references to "vehicles" would become "location units."

31. The Commission in its 1974 Report and Order made clear that 904-912 MHz and 918-926 MHz were reserved for wideband operation only.

The Commission finds that the
allocation of spectrum in the 900 MHz
(continued...)

sufficient capacity to allow the introduction of wideband pulse-ranging technology without suffering intolerable levels of interference in the 902-928 MHz band. Because this technology requires wideband capacity, it is essential that permanent new rules retain the 8 MHz-wide frequency assignment plan.

30. Moreover, a forward link frequency is necessary to transmit a signal from the NCC to the RLU installed in the monitored vehicle or other object. This forward link would operate with a 250 KHz bandwidth within a certain frequency range in the corresponding wideband channel block as shown in Table I.

31. (...continued)

band for licensing of wideband systems is in keeping with our objective of allowing full scope for development of AVM techniques. Accordingly, we are providing for wideband AVM operation in the frequency bands 904-912 MHz and 918-926 MHz.

1974 Report and Order ¶10, 30 RR2d at 1670-1671.

TABLE I

	<u>Wide Band Return Link</u>	<u>Forward Link</u> ^{32/}
Lower AVM Band	904-912 MHz	924.890-925.140 MHz
Upper AVM Band	918-926 MHz	904.375-904.625 MHz

31. The proposed forward link is critical to an efficient and economic consumer wideband AVM service. Separation of the transmit and receive frequencies results in built-in isolation, thereby reducing the need to install complex and expensive circuitry in the radiolocation unit. Nationwide use of the same forward frequency will also facilitate equipment standardization, resulting in even lower costs.^{33/}

32. Narrowband systems, requiring no more than 1 MHz bandwidth, were authorized to operate only in the 903-904

32. Teletrac is licensed in the 904-912 MHz band and METS/Ameritech and Roger Lindquist are licensed in the 918-926 MHz band in certain markets. The forward link for the upper band is taken from the METS/Ameritech licenses.

33. Equipment operating on the wideband frequencies and forward links would be limited to an output power of 300 watts, 47 C.F.R. § 90.205(b)(1991), and the Frequency Tolerance Table would reflect values of 0.0005, 47 C.F.R. § 90.213(a)(1991).

and 926-927 MHz bands on a developmental basis^{34/} under the interim rules. 47 C.F.R. § 90.239(c)(2)(1991).

Because of the limitations of a developmental license, narrowband vehicle identification systems have sought and been granted licenses in the 904-912 and 918-926 MHz bands. These narrowband systems generally employ passive radio circuitry attached to vehicles that reflect the signal emitted by a transmitter.^{35/} These narrowband systems, however, can interfere with wideband pulse-ranging AVM

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34. Due to problems with the frequencies normally used for narrowband systems, the Commission in 1974 specifically reserved the 903-904 MHz and 926-927 MHz bands for developmental narrowband (then called "mediumband") applications:

The Commission believes that the proposed 900 MHz reallocation should encompass also those AVM techniques, other than the wideband method, which are able to tolerate possible interference from ISM or government operations. Thus, the frequencies 903-904 and 926-927 MHz, which had been included in the proposed reallocation for wideband AVM, are being made available for such other systems. These frequencies will be assignable on a developmental basis for licensing of "mediumband" AVM systems requiring bandwidths up to 1 MHz.

1974 Report and Order ¶12, 30 RR2d at 1671 (emphasis added). See 47 C.F.R. § 90.239(c)(2) (1991). The Commission also reserved 902-903 MHz and 927-928 MHz for future allocation. 1974 Report and Order, 30 RR2d n.8 at 1671.

35. Such equipment is beginning to be used at toll collection booths and similar locations.

systems and, therefore, future narrowband systems must be restricted to the 903-904 and 926-927 MHz bands only, as provided for in the interim rules, but the developmental restriction should be lifted.

C. Co-Channel Separation Is Required.

33. Teletrac proposes co-channel separation requirements in order to maximize system capacity, protect service quality and encourage development of future services.^{36/}

34. The Commission has always required certain services to maintain co-channel separations between stations (e.g., broadcasting, SMRS) to avoid harmful interference.^{37/} Co-channel separation allows wide technical flexibility, permitting the system operator to

36. This will present no competitive policy issue. As noted previously, Teletrac and other wideband pulse-ranging systems must compete with a variety of other service providers. See ¶5 supra; see also Trimble News Release, March 2, 1992, Attachment K.

37. We deal primarily with co-channel separations in mobile services. Co-channel separation in fixed services is achieved by frequency coordination, which examines a data base of other co-channel users and assures that a new applicant will not cause interference to existing licensees. In fixed satellite service, the Commission assigns orbital slots to achieve co-channel separation.

take advantage of technological alternatives that reduce interference^{38/}. Moreover, these simple requirements reduce the expenditure of scarce Commission resources because they are largely self-executing.^{39/}

35. The need for co-channel separation requirements can be illustrated by examining the alternative -- not requiring co-channel separation. In the early days of radio when technology was more limited and demand was lower, band sharing may have made economic sense. A shared band today, however, can lead to an overuse of a public resource, i.e., a "Tragedy of the Commons."^{40/} The

38. This has been the case in such diverse services as microwave, fixed satellite, cellular and, more recently, SMRS.

39. The Commission has endorsed regulatory simplicity in other services. For example:

The fact that domestic satellite licensees generally operate unencumbered from undue regulatory intrusions appears to be a contributing factor to the technical, service and market innovation that currently exemplifies this industry.

Licensing of Space Stations in the Domestic Fixed-Satellite Service, 54 R.R. 2d ¶9, 577 (1983).

40. See Garrett Hardin, "The Tragedy of the Commons," Science, Vol. 162, 168, p. 1343. Generally, the tragedy of the commons refers to the situation where the incentives to exploit a common property resource, such as a fishery, lead to its destruction. That same result can occur in a radio band.

problem arises when each user of a shared band ignores the economic impact of its band use on the operation of other systems in the band. When a shared band system user raises power or, where power level is limited and the shared band user transmits for a greater fraction of the time, increased interference flows to the others in the band. As a result, society is harmed through inefficient spectrum use.

36. Exclusive licenses avoid these problems. The Commission has moved towards far greater use of exclusive licensing in recent years -- SMRs, IVDS,^{41/} MAS, and the 220 MHz channels made available recently^{42/} all have geographic separation requirements that avoid harmful interference between licensees. In fact, the Commission has stated:

The concept of exclusivity has gained such general acceptance that it has become viewed as an automatic feature of new allocations to the PLMR services.^{43/}

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41. Technically, IVDS does not have a "co-channel" separation requirement. Rather, IVDS systems are licensed in exclusive geographic service areas.
 42. Report and Order, PR Docket No. 89-552, 56 Fed. Reg. 19598 (1991).
 43. Notice of Inquiry, Spectrum Efficiency in the Private Land Mobile Bands in Use Prior to 1968, PR Docket No. 91-170, 6 FCC Rcd 4126, 4133 (1991) (footnote omitted).

1. Co-channel Separation Was Envisioned in the 1974 Report and Order.

37. The Commission's 1974 AVM Report and Order anticipated the need for geographic separation of co-channel AVM systems:

The Commission finds that the allocation of spectrum in the 900 MHz band for licensing of wide band systems is in keeping with our objective of allowing full scope for development of AVM techniques. Accordingly, we are providing for wideband AVM operation in the frequency bands 904-912 and 918-926 MHz. This reduces the bandwidth for the pulse-ranging techniques from 10 MHz to 8 MHz, but we are satisfied that this is adequate for this operational method and under this approach, two separate wideband AVM systems may be accommodated in each market.^{44/}

38. The interim rules provide that a licensee will not be assigned a second frequency in the same geographic area until the first frequency is "filled up" with at least 5,000 vehicles.^{45/} 47 C.F.R. § 90.239(c)(1)(i)(1991). This provision would be unnecessary if the radio channels could be dynamically shared among multiple licensees in an efficient fashion. To the contrary, the interim rules

44. 1974 Report and Order, 30 RR2d ¶10 at 1670-71 (emphasis supplied.)

45. Good technical design and economic considerations dictate that a licensee would choose to increase the number of vehicles served on one frequency to the maximum limit before moving to a second frequency.

envision a single licensee on a frequency assignment. Although the 1974 Report and Order and the interim rules do not explicitly refer to co-channel interference and coordination procedures, the Commission specifically included in the interim rules the power to impose additional appropriate technical requirements to assure efficient and effective frequency utilization. 47 C.F.R. § 90.239(e)(4).

2. Technical Flexibility Must Be Retained.

39. Teletrac has been able to build and offer service under the interim rules, routinely responding to customer location requests with location estimates that are within 100 feet to 150 feet of the true location. The technical flexibility offered by the current rules has allowed Teletrac to design a system that works well and yet is affordable enough to meet broad market needs. Achieving 100 to 150 foot accuracy^{46/} is a substantial technical achievement that requires precise and accurate measurement of the time-of-arrival of pulses. Teletrac has also addressed the problems of signal-to-noise ratio, multipath and shadowing, and the development of support technologies

46. The system normally operates with accuracy in the 100 foot range.

(digital maps, data bases) which are correspondingly accurate.

40. Maintenance of the technical flexibility permitted under the current rules and achievement of high spectrum and economic efficiency depends on co-channel separation requirements. In the event that a co-channel requirement is not added, it can be anticipated that the band will degenerate with massive interference and provide little utility to the public.^{47/}

41. Failure to impose a co-channel separation requirement will result in a far more burdensome regulatory regime than exists today.^{48/} With a co-channel separation requirement and technological flexibility, licensees would be able to innovate freely and bring improved technology to market quickly. Technical flexibility can permit innovation to move into the market

47. See Appendix 2, "Impact of Co-Channel Interference on 900 MHz Wideband, Pulse-Ranging System Performance."

48. For example, the Commission might have to adopt detailed technical standards setting out power limits for fixed and mobile stations, modulation methods, detailed channel plans, channel access protocols, and possibly additional rules allowing co-channel operators to time-share the spectrum or co-locate their transmitter sites.

and serve consumers without excessive regulatory delay.^{49/}

3. Teletrac's Proposal

42. The Commission's permanent rules should recognize that modern wideband AVM technology offers enormous capacity. Each Teletrac system can accommodate up to sixteen million RLU's and six million location requests per day in a given geographic area. As a result, two AVM service providers can more than accommodate the potential users of AVM in a competitive fashion. By establishing well-defined system boundaries, the Commission will ensure that licensees, such as Teletrac, who have made large financial investments in establishing AVM will have appropriate interference protection.

43. The area of geographic protection extended to wideband AVM licensees must be broad enough to ensure that an entire metropolitan area can be covered. Fleet tracking services customers, for example, must be assured of a coverage area encompassing their territory. In order for law enforcement and private vehicle theft protection customers in particular to receive the full benefit of

49. See, e.g., n. 35, supra.

their services, wide area coverage must be available to track perpetrators who usually flee the scene of their crime as soon as possible.

44. Accordingly, we recommend that the Commission establish a standard service area encompassing a fifty-mile radius from the center of each major urbanized area recognized in the Commission's Rules. See 47 C.F.R. § 90.635 (1991). In addition, the co-channel separation should be established as 110 miles. The 50 mile service area radius/110 mile co-channel separation criteria will enable an AVM licensee to provide sufficient wide area coverage to meet the needs of a variety of users and provide a high quality transmission signal throughout the service area.^{50/} For systems outside major urbanized areas, the coordinates of the center of the service area should be designated by the licensee. Additionally, system operators in adjacent service areas should be required to coordinate implementation and operation of their systems.

45. Implementing multi-market AVM throughout the United States requires hundreds of millions of dollars.

50. The distances we propose should be sufficient to permit a major metropolitan area to be served under a single license thereby making system development more cost efficient.

Similar to those often used before by the Commission, the service area criteria we recommend will assure market viability for those undertaking the substantial financial risk of implementing AVM technology.^{51/}

D. Applications and Licensing.

46. Applications for licenses to construct and operate AVM systems should continue to be accepted on a first-come, first-served basis. Mutually exclusive applications filed on the same day should be placed in a lottery.^{52/}

47. A system should be considered constructed and operational when it is available to potential customers on a commercial basis. Also, for licensees who seek to

51. Most recently, the Commission proposed service area protection criteria for the new Interactive Video Data Services; Amendment of Parts 0, 1, 2 and 95 of the Commission's Rules to Provide for Interactive Video Data Services, Report and Order, Gen. Dkt. No. 91-2 FCC 92-22 ¶ 62 (Feb. 13, 1992) (adopting cellular service area). Similar criteria have been established for Specialized Mobile Radio Systems, 47 C.F.R. § 90.621(c)(1991) and for Multiple Address Systems, Amendment of the Rules and Regulations to Re-Channel the 900 MHz Multiple Address Frequencies, PR Dkt. No. 87-5, 3 FCC Rcd. 1564 (1988).

52. Should the Commission determine that such a selection procedure is not in the public interest, selection of licensees by means of comparative hearings may be an equally acceptable alternative.

develop systems in multiple locations (10 or more), Teletrac proposes a ten year construction and license period. If the Commission determines that a more flexible standard is required, Teletrac proposes alternatively that the FCC adopt benchmark construction requirements similar to those adopted for nationwide mobile radio licenses for licensees holding more than ten licenses.^{53/} The construction of an AVM system is a massive undertaking, involving a significant investment of time and money due to the costs of constructing each system. Each individual system requires the construction and implementation of a complex computerized infrastructure, installation of multiple transmitters, and the coordination of multiple receive sites connected by a wireline or microwave network.

53. See Report and Order, Amendment to Provide for the Use of the 220-222 MHz Band by the Private Land Mobile Radio Services, PR Dkt. No. 98-552, 6 FCC Rcd 2356 (1991) ("220-222 MHz Report and Order"). The benchmarks could be derived from the construction requirements of 47 C.F.R. 90.725 (1991):

<u>Time (after grant)</u>	<u>Build Out Requirement</u>	<u>Sanction for failure to meet requirement</u>
2 years	10 percent	Loss of authorization for unconstructed facilities
4 years	40 percent	Loss of authorization for unconstructed facilities
6 years	60 percent	Loss of authorization for unconstructed facilities
10 years	100 percent	Loss of authorization for unconstructed facilities

A construction benchmark will allow sufficient time for AVM system licensees to construct and place AVM networks into operation. Finally, Teletrac recommends that AVM operating licenses be for a term of ten years.^{54/}

48. The Commission has recognized the public interest benefits inherent in multiple market networks.^{55/} A multi-market AVM network will provide an extended range in which vehicles, people or other objects can be monitored and located. It will also encourage innovation and provide a greater incentive to improve spectrum efficiency.

49. There should also be no loading requirements applicable to wideband AVM licensees.^{56/} AVM technology

54. The Commission previously recognized the need for ten year license terms for multiple system licensees. See, e.g., 220-222 MHz Report and Order, 6 FCC Rcd ¶65-69; Waiver of Sections 90.621(d), 90.623(a), 90.629, 90.633, and 90.651(c) of the Commissions's Rules to License Use of Six Conventional 900 MHz Frequency Pairs for an Advanced Train Control System, 3 FCC Rcd 427, 428 (1988).

55. See, e.g., 220-222 MHz Report and Order, 6 FCC Rcd ¶30-39 at 2360-2362.

56. For example, a loading requirement would necessitate the constant filing of modification applications. Indeed, the Commission has recognized that loading standards may be difficult to administer and are therefore inappropriate for certain commercial services. See, e.g., 220-222 MHz Report and Order, 6 FCC Rcd ¶81 at 2367. Although Teletrac does not propose a loading requirement, if the Commission
(continued...)

can accommodate millions of end users, handling many millions of location requests per day. Because of this enormous capacity and the speed with which new end users are expected to be added, the administrative application of any loading standards would be burdensome and unnecessary.^{57/}

IV. TRANSITION TO PERMANENT RULES.

50. The transition to permanent rules should not disrupt any existing licensee. Teletrac, for example, is already operating commercially under licenses obtained from the Commission. Teletrac commenced service in various markets and expects to expand substantially under a more definite regulatory regime. Teletrac and all other current license holders should be allowed to continue operation under their existing licenses and renew in accordance with the timeframes set out in the permanent rules. Moreover, narrowband licensees licensed in the 904 - 912 MHz or 918 -

56. (...continued)

determines that such a requirement is necessary, Teletrac has no objection.

57. The huge investment required to construct and implement a wideband system insures that licensees will have adequate marketplace incentives to serve a large number of end users. Should the Commission nonetheless desire to be kept apprised of system loading, reporting requirements could be required in lieu of specific loading standards.

926 MHz bands on the day of this petition should be allowed to renew their licenses in their current band.

51. The Commission has recognized in a variety of circumstances that "grandfathering" existing licenses during the transition to a new regulatory regime promotes the public interest.^{58/} Maintaining the status quo with regard to existing AVM licensees is in the public interest because it will minimize disruption of this service to the public and assure the flow of capital necessary to expand this service to even greater numbers of users quickly and efficiently.

CONCLUSION

52. Teletrac urges the Commission to issue promptly a Notice of Proposed Rulemaking incorporating the permanent rules recommended herein. Expedited action on this Petition will bring the full benefits of AVM to the

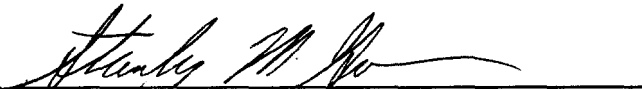
58. See, e.g., Notice of Proposed Rulemaking, Redevelopment of Spectrum to Encourage Innovation in the Use of New Telecommunications Technology, ET Dkt. No. 92-9 at ¶25 (January 16, 1992); Second Report and Order, Amendment of Parts 89, 91, 93, and 95, 11 FCC 2d 648, 661 (1968); Report and Order, Amendment of Section 90.81 of the Commission's Rules Regarding the Telephone Maintenance Radio Service, RR Dkt. No. 84-884 at ¶17 (1986).

American consumer, as well as encourage greater efficiency in the important transportation, business and public service sectors of the United States economy.

Respectfully submitted,

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Dated: May 26, 1992

APPENDICES

APPENDIX 1: PROPOSED RULES

APPENDIX 2: IMPACT OF CO-CHANNEL INTERFERENCE ON
900 MHz WIDEBAND PULSE-RANGING AVM
SYSTEM PERFORMANCE

PROPOSED RULES

Part 90 of Chapter I of Title 47 of the Code of Federal Regulations is proposed to be amended as follows:

PART 90 - PRIVATE LAND MOBILE RADIO SERVICES

1. Section 90.7 is amended by modifying the definition of "Automatic Vehicle Monitoring", as well as by adding a definition for "Wideband Pulse-Ranging System" in their appropriate alphabetical order to read as follows:

§ 90.7 Definitions.

* * * * *

Automatic Vehicle Monitoring (AVM). The use of non-voice signalling methods from and to location units to make known the location of such units at fixed points. AVM systems may also transmit status and instructional messages related to the units involved.

* * * * *

Wideband Pulse-Ranging Systems. A wideband pulse-ranging system is an information bearing communications system in which: (1) information is conveyed by modulation of a pulse by some conventional means; (2) the bandwidth of the pulse is deliberately widened over that which would be needed to transmit the information alone in order to improve ranging system performance; and (3) is used to determine distance (range) or location.

2. Section 90.101 is revised to read as follows:

§ 90.101 Scope.

The Radiolocation Service accommodates the use of radio methods for determination of direction, distance, speed, or position for purposes other than navigation. Rules as to eligibility for licensing, permissible communications, frequency availability, and any special requirements are set forth in the following section, except that the operation of Automatic Vehicle Monitoring (AVM) systems is governed by provisions set forth in § 90.239.

3. Section 90.103 is revised by adding the frequency ranges 903-904 MHz, 904-912 MHz, 918-926 MHz, and 926-927

MHz in their appropriate numerical positions in the "Radiolocation Service Frequency Table" contained in paragraph (b). The corresponding "Class of station(s)" will be listed as "Radiolocation land or mobile". The limitation number "31" will be entered next to each of the frequency range entries. New limitation footnote 31 will be inserted in paragraph (c). Paragraph (d) will be removed in its entirety and marked "Reserved."

§ 90.103 Radiolocation Service

* * * * *

(c) * * *

(31) These frequency bands may be employed for Automatic Vehicle Monitoring (AVM) system operations in accordance with § 90.239.

(d) [Reserved.]

* * * * *

4. In Section 90.149, new paragraphs (d) and (e) are added to read as follows:

§ 90.149 License term.

* * * * *

(d) An entity licensed for an Automatic Vehicle Monitoring (AVM) system operating pursuant to the provisions of § 90.239 in the frequency bands 904-912 MHz or 918-926 MHz in ten or more markets will be issued licenses for a term not to exceed ten years from the date of the original issuance, modification or renewal.

(e) The license terms of licensees, or their successors or assignees in business, holding authorizations in the frequency bands 904-912 MHz or 918-926 MHz in ten or more markets issued prior to [effective date of new rules], shall be extended to a term of ten years from the date of original authorization.

* * * * *

5. In § 90.155, paragraph (a) is revised to read as follows:

§ 90.155 Time in which station must be placed in operation.

(a) All stations authorized under this part, except as provided in paragraph (b) and in §§ 90.239, 90.629 and 90.631(c), must be placed in operation within eight (8) months from the date of grant or the authorization cancels automatically and must be returned to the Commission.

* * * * *

6. Section 90.175 is amended by adding new paragraph (f)(15) to read as follows:

§ 90.175 Frequency coordination requirements.

* * * * *

(f) * * *

(15) Applications for Automatic Vehicle Monitoring (AVM) system stations filed pursuant to § 90.239.

7. Section 90.203 is amended by adding new paragraph (b)(7) to read as follows:

§ 90.203 Type acceptance required.

* * * * *

(b) * * *

(7) Equipment authorized for AVM systems in the frequency bands 904-912 MHz and 918-926 MHz manufactured or imported prior to 12 months after [effective date of the rules.]

* * * * *

§ 90.205 [Amended].

8. Section 90.205 is amended by revising the table to paragraph (b) to add the frequency ranges 903-904 MHz, 904-912 MHz, 918-926 MHz and 926-927 MHz in its appropriate numerical position in the column labelled "Frequency range". Alongside the entries for 904-912 MHz and 918-926 MHz, a maximum output power of 300 watts is entered. Alongside the entries for 903-904 MHz and 926-927 MHz, the maximum effective radiated power is entered as "Footnote 4".

9. In § 90.207, paragraph (g) is revised to read as follows:

§ 90.207 Types of emissions.

* * * * *

(g) For AVM operations that may be authorized in accordance with § 90.239, only F1D, F2D, F3E, or F9W, G1D, G2D, G3E or PON emissions will be authorized.

* * * * *

10. Section 90.209 is amended by adding new paragraph (b)(10) to read as follows:

§ 90.209 Bandwidth limitations.

* * * * *

(b) * * *

(10) The maximum authorized bandwidth for AVM stations using wideband pulse-ranging systems operating in the range 904-912 MHz and 918-926 MHz shall be 8 MHz.

§ 90.213 [Amended].

11. Section 90.213 is amended by revising the Frequency Tolerance Table associated with paragraph (a) to add the frequency ranges 903-904 MHz, 904-912 MHz, 918-926 MHz and 926-927 MHz in their appropriate numerical position. Alongside the entries for 904-912 MHz and 918-926 MHz, the value for all classed of stations is 0.0005. Alongside the entries for 903-904 MHz and 926-927 MHz, for all classes of stations, the frequency tolerance is entered as "Footnote 14."

12. Section 90.239 is deleted in its entirety and replaced as follows:

§ 90.239 Provisions for operation of Automatic Vehicle Monitoring (AVM) Systems.

(a) The provisions of this section authorize, to persons eligible in the radio services of this part, the licensing of Automatic vehicle monitoring (AVM) systems that utilize non-voice radio techniques to determine the status of location units for the use of individuals, federal government agencies and entities eligible for